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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,420	05/11/2006	Uwe Neumann	VOGEL.AIRB.PT1	6138

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INTELLECTUAL PROPERTY LAW GROUP LLP  
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SAN JOSE, CA 95113

EXAMINER
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O'HARA, BRIAN M

ART UNIT	PAPER NUMBER
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3644

NOTIFICATION DATE	DELIVERY MODE
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02/07/2011

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

pt\_docket@iplg.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/579,420	<b>Applicant(s)</b> NEUMANN ET AL.	
	<b>Examiner</b> Brian M. O'Hara	<b>Art Unit</b> 3644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 38-52 and 54-64 is/are pending in the application.
- 4a) Of the above claim(s) 38-51 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 52 and 54-64 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/17/2010</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 52-64 are rejected under 35 U.S.C. 112, second paragraph**, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. **Claim 52** recites the limitation "respective subsystems" in line 17. There is insufficient antecedent basis for this limitation in the claim.

4. **Claim 52** recites the limitation "port and starboard wings" in Line 17. There is insufficient antecedent basis for this limitation in the claim.

5. The subsystems and wings have not been clearly defined which makes it impossible to discern what signals are being compared by the monitoring unit. For purposes of examination, only the "whereas the monitoring unit is provided to carry out a signal comparison" portion of the newly amended language of Claim 52 is being given any weight. The remaining portion of the newly amended language of Claim 52 is rejected as best understood as described in the rejection below.

6. **Claims 53-64** are rejected for being dependent upon a rejected base claim.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3644

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims **52, 55, 57, 59, 61, 63, and 64** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bedell et al (US 5686907 A) in view of Baston et al. (US Patent 4,260,121)**.

9. Regarding **Claims 52 and 55**, Bedell et al. discloses an apparatus for load limiting in an aircraft high-lift system having:

a branching drive system (See Fig. 11) for mechanical power transmission to drive stations (stations indicated by gearing 43) for individual segments of landing-flap/slat systems (20 and 22) via respective drive trains (36) position sensors (44 and 34), and a drive unit (35),

wherein the position sensors have angle position transmitters (34), which operate as asymmetry transmitters, at the ends of the drive trains (See Fig. 4),

wherein the apparatus has a monitoring unit (50) for load limiting which is connected to the position sensors (See wires in Fig. 4) and is designed to process signals from the position sensors (34) by measuring signals from at least two position sensors (34 and 44) and calculating at least one reference variable ("expected slat states"; See Column 7 Lines 47-48) from the measured signals and,

by comparison of the at least one reference variable which represents a load in the drive trains with a corresponding threshold value ("actual slat sensor states" See Column 7 Lines 49-51), which is predetermined from a maximum permissible load,

whereas the monitoring unit (50) is provided to carry out a signal comparison between respective subsystems (between 40 and 42 with 34) which are associated with the port and starboard wings (40 and 42 are on the wings; at least one subsystem each, on each wing) and each comprise a drive train, a position transmitter which is located at the end of the drive train (each wing has a drive train and pos. transmitter),

produces a control signal (shut down) for monitored limiting (35) of the power supply (52) to the drive unit in the sense of limiting a drive power that is supplied (See Column 7 Line 29 to Column 8 Line 4).

Bedell et al. is silent on the use of a sensor mounted on the drive unit. Baston et al. teaches an apparatus for load limiting in an aircraft high-lift system (See Fig. 1) comprising an angle position transmitter (30, 31 and 32) on the drive unit (23+24+20) where the position sensor is used to monitor asymmetry (see abstract) and signals are sent to a control unit (27). At the time of invention, it would have been obvious to one of ordinary skill in the art to include a position sensor on the drive unit of Bedell et al. in view of the teaching of Baston et al. The motivation for doing so would have been to further monitor the system for drive failure.

10. Regarding **Claim 57**, Bedell et al. discloses a monitoring unit (50) capable of signal comparison between two respective subsystems (FSEU1 and FSEU2).

11. Regarding **Claims 59 and 61**, Bedell et al. discloses using signals provided by the sensors (44) mounted on branching transmissions (43) of the drive trains to calculate a reference value ("expected slat states"; See Column 7 Lines 47-48).

Art Unit: 3644

12. Regarding **Claim 63**, Bedell et al. discloses that the drive unit can be controlled in a highly dynamic manner (via 50 and 52).

13. Regarding **Claim 64**, Bedell et al. discloses a drive unit and branching transmission as described above, but does not disclose a shaft section between the two that is highly flexible. Baston et al. discloses a shaft section of high flexibility (21). At the time of invention it would have been obvious to one of ordinary skill in the art to provide the shaft section of Baston et al. between the drive unit and branching transmission of Bedell et al. The motivation for doing so would have been to locate the drive unit in an easy to access area for maintenance reasons.

14. **Claims 54, 56, 58, 60 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bedell et al. and Baston et al. as applied to claims 52, 55, and 59 above, and further in view of Lindstrom et al. (US Patent 6,299,108 B1).** Bedell et al. and Baston et al. disclose the apparatus for load limiting as described above. Bedell et al. also teaches the use of position transmitters (44) at the branching transmissions (43) of the drive trains, but does not teach the position transmitters being angle position transmitters. Lindstrom et al. teaches the use of angle position transmitters (30) on branching transmissions (12) for a drive limiting apparatus. At the time of invention, it would have been obvious to one of ordinary skill in the art to replace the position sensors (44) of Bedell et al. with the angle position transmitters (30) of Lindstrom et al. The motivation for doing so would have been to provide more accurate angle information, i.e. a higher position resolution.

***Response to Arguments***

15. Applicant's arguments filed 11/17/2010 have been fully considered but they are not persuasive.

16. On page 8 through Page 9, Line 2, Applicant argues that the system of Bedell is not suited for detecting a jamming within the entire drive system. The examiner respectfully disagrees with this argument because any jamming, including the jamming of a single flap or slat as described by Bedell, is indicative of a jamming of the entire system. The claims do not limit the system to monitoring of only the skew of the torque tube ends; which applicant seems to regard as the jamming of the entire system.

17. Further, the entire system of Bedell is connected by the torque tube 36, so if the end position sensor's (34) reference value indicated no rotation while the other position sensors (44) indicated rotation then the entire system could be considered to be jammed.

18. On Page 9, Lines 3-14 applicant argues that Bedell does not disclose an angle position transmitter on the drive unit. The rejection set forth above and in the 08/17/2010 Office Action combines Bedell with the teaching of Baston to provide a position transmitter on the drive unit. The motivation for doing so is to provide fail safe monitoring system by further monitoring the position on the drive unit in the case of failure of the position sensor 34; i.e. further monitor the system. Making a system fail safe is a fairly common practice in aircraft construction.

19. On Page 9, Lines 15-22 applicant argues that Baston fails to disclose position transmitters at the ends of the drive trains. This argument is not seen to be

Art Unit: 3644

commensurate with the scope of the rejection. In the 103(a) rejection, Baston is used to teach the monitoring of the position of the drive unit.

### ***Conclusion***

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian M. O'Hara whose telephone number is (571)270-5224. The examiner can normally be reached on Monday thru Friday 10am - 5pm except the first Friday of every Bi-week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy D. Collins can be reached on (571)272-6886. The fax phone

Art Unit: 3644

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Timothy D. Collins/  
Supervisory Patent Examiner, Art  
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/B. M. O./  
Examiner, Art Unit 3644